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Terms: patno=6021303 (Edit Search)

#### 309922 (00) 6021303 February 1, 2000

# UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT **6021303**

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### Link to Claims Section

#### February 1, 2000

Image heating device and image forming device using the same **REISSUE:** February 1, 2002 - Reissue Application filed Ex. Gp.: 2852; Re. S.N. 10/006,035 (O.G. October 8, 2002)

**INVENTOR:** Terada, Hiroshi, Ikoma, JP; Toyoda, Akinori, Katano, JP; Urata, Yoshihito, Katano, JP; Yamamoto, Hajime, Ikoma, JP; Genji, Nobuo, Osakasayama, JP; Ishimaru, Naoaki, Minoo, JP; Nakatsugawa, Tatsuo, Utsunomiya, JP; Naito, Masakazu, Shioya-gun, JP

**APPL-NO:** 309922 (00)

**FILED-DATE:** May 11, 1999

**GRANTED-DATE:** February 1, 2000

**PRIORITY:** May 15, 1998 - 10-132984, Japan (JP); July 17, 1998 - 10-203005, Japan (JP)

ASSIGNEE-AT-ISSUE: Matsushita Electric Industrial Co., Ltd., Osaka, JP

**ASSIGNEE-AFTER-ISSUE:** August 4, 1999 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., MATSUSHITA GRAPHIC COMMUNICATION SYSTEMS, INC. 2-3-8, SHIMOMEGURO, MEGURO-KU TOKYO 153-8687 JAPAN, Reel and Frame Number: 010139/0355

LEGAL-REP: Merchant & Gould, P.C.

**PUB-TYPE:** February 1, 2000 - Utility Patent having no previously published pre-grant publication (A)

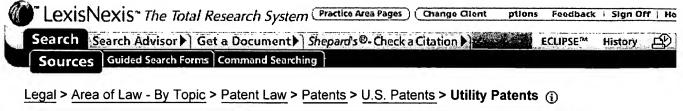
PUB-COUNTRY: United States (US)

**US-MAIN-CL:** 399#328

**US-ADDL-CL:** 399#329, 399#330, 399#335

CL: 399

SEARCH-FLD: 399#320, 399#328, 399#329, 399#330, 399#333, 399#335, 399#338



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Search statement 1

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\*\* SS 1: Results 1

Search statement 2

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1/1 PLUSPAT - (C) QUESTEL-ORBIT
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PN - US6021303 A 20000201 [US6021303]

TI - (A) Image heating device and image forming device using the same

PA - (A) MATSUSHITA ELECTRIC IND CO LTD (JP)

PAO - Matsushita Electric Industrial Company, Ltd., Osaka [JP]

IN - (A) TERADA HIROSHI (JP); TOYODA AKINORI (JP); URATA YOSHIHITO (JP); YAMAMOTO HAJIME (JP); GENJI NOBUO (JP); ISHIMARU NAOAKI (JP); NAKATSUGAWA TATSUO (JP); NAITO MASAKAZU (JP)

AP - US30992299 19990511 [1999US-0309922]

PR - JP13298498 19980515 [1998JP-0132984]

- JP20300598 19980717 [1998JP-0203005]

IC - (A) G03G-015/20

EC - G03G-015/20H2D

- G03G-015/20H2P3

ICO - S03G-215/20A3

PCL - ORIGINAL (O): 399328000; CROSS-REFERENCE (X): 399329000 399330000 399335000

DT - Corresponding document

CT - US4256945; US5568240; US5713069; US5752148; US5765086; US5768673; US5778293; US5822669; US5862445; US5881349; US5939337; US5940655

STG - (A) United States patent

AB - An image heating device comprises a cylindrical heating roller with a Curie temperature of 210 (degree) C., a magnetization coil for magnetizing the heating roller with an alternating magnetic field, which is arranged inside the heating roller, and a nip portion for heating a recording material that carries a toner image with heat from the heating roller, while the recording material is being conveyed along said nip portion. The ratio between the amount of heat generated in said heat-generating member at Curie temperature or higher to the amount of heat generated at room temperature in said heat-generating member is not more than 1/2. With this configuration, the heating roller can regulate its own temperature to stabilize at a temperature that is suitable for fixing, and the problems of partial overheating or underheating, unstable heat generation, or damage of the device can be eliminated.

1/1 LGST - (C) LEGSTAT

PN - US 6021303 [US6021303]

AP - US 309922/99 19990511 [1999US-0309922]

DT - US-P

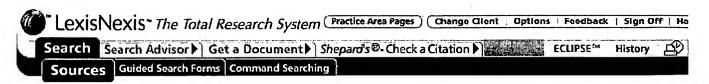
ACT - 19990511 US/AE-A

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APPLICATION DATA (PATENT)
       {US 309922/99 19990511 [1999US-0309922]}
      - 20000201 US/A
       PATENT
      - 20021008 US/RF
       REISSUE APPLICATION FILED
       20020201
  UP - 2002-42
 1/1 CRXX - (C) CLAIMS/RRX
 AN - 3276386
 PN - 6,021,303 A 20000201 [US6021303]
  PA - Matsushita Electric Industrial Co Ltd JP
 PT - E (Electrical)
 ACT - 20020201 REISSUE REQUESTED
       ISSUE DATE OF O.G.: 20021008
       REISSUE REQUEST NUMBER: 10/066035
       EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2852
       Reissue Patent Number:
 UP - 2002-41
 UACT- 2002-10-08
 Search statement
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 Covers 1968/1973 thru weekly updates (2003-14)
 For information on content, .. INFO INPD.
 Search statement
?fam us6021303/pn
 1 Patent Groups
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 Search statement
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 1/6 INPADOC - (C) INPADOC
 PN - CN 1236121 A 19991124 [CN1236121]
 TI - IMAGE HEATER AND IMAGE FORMING DEVICE USING THE SAME
 IN - TERADA HIROSHI [JP]; YAMAMOTO HAJIME [JP]; TOYODA AKINORI [JP]
 PA - MATSUSHITA ELECTRIC IND CO LTD [JP]
 AP - CN 99106645/99-A 19990517 [1999CN-0106645]
 PR - JP 132984/98-A 19980515 [1998JP-0132984]
     - JP 203005/98-A 19980717 [1998JP-0203005]
 IC - G03G-015/20; G03G-015/02
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   - EP 957412 A3 20010627 [EP-957412]
   - IMAGE HEATING DEVICE AND IMAGE FORMING DEVICE USING THE SAME
   - ENG
   - TERADA HIROSHI [JP]; TOYODA AKINORI [JP]; URATA YOSHIHITO [JP];
     YAMAMOTO HAJIME [JP]; GENJI NOBUO [JP]; ISHIMARU NAOAKI [JP]
   - MATSUSHITA ELECTRIC IND CO LTD [JP]; MATSUSHITA GRAPHIC [JP]
AP - EP 99108631/99-A 19990511 [1999EP-0108631]
PR - JP 132984/98-A 19980515 [1998JP-0132984]
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      PT* SE*
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AP - EP 99108631/99 19990511 [1999EP-0108631]
DT - EP-P
ACTE- 19990511 EP/AE-A
     EP-APPLICATION
     {EP 99108631/99 19990511 [1999EP-0108631]}
   - 19991117 EP/AK-A2 [+]
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   - 19991117 EP/AX [+]
     EXTENSION OF THE EUROPEAN PATENT TO
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   - 19991117 EP/A2 [+]
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   - 20010627 EP/A3 [+]
     SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)
   - 20010905 EP/17P [+]
     REQUEST FOR EXAMINATION FILED
     20010706
   - 20020320 EP/AKX [+]
     PAYMENT OF DESIGNATION FEES
     DE GB
UP - 2002-12
3/6 INPADOC - (C) INPADOC
   - EP 957412 A2 19991117 [EP-957412]
TI - IMAGE HEATING DEVICE AND IMAGE FORMING DEVICE USING THE SAME
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T.A
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   - MATSUSHITA ELECTRIC IND CO LTD [JP]; MATSUSHITA GRAPHIC COMMUNIC [JP]
AP - EP 99108631/99-A 19990511 [1999EP-0108631]
PR - JP 132984/98-A 19980515 [1998JP-0132984]
    - JP 203005/98-A 19980717 [1998JP-0203005]
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IC - G03G-015/20
DS - DE* GB*
1/1 LEGALI - (C) LEGSTAT
PN - EP 957412 [EP-957412]
AP - EP 99108631/99 19990511 [1999EP-0108631]
DT - EP-P
ACTE- 19990511 EP/AE-A
      EP-APPLICATION
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      20010706
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      PAYMENT OF DESIGNATION FEES
      DE GB
UP - 2002-12
4/6 INPADOC - (C) INPADOC
PN - JP 2000035724 A2 20000202 [JP2000035724]
TI - IMAGE HEATING DEVICE AND IMAGE FORMING DEVICE
   - TERADA HIROSHI; TOYODA AKINORI; GANJI NOBUO; ISHIMARU NAOAKI;
     NAKATSUGAWA TATSUO; NAITO MASAKAZU
PA - MATSUSHITA ELECTRIC IND CO LTD; MATSUSHITA GRAPHIC COMMUNIC
AP - JP 203005/98-A 19980717 [1998JP-0203005]
PR - JP 203005/98-A 19980717
                               [1998JP-0203005]
IC - G03G-015/20; G03G-015/20; H05B-006/14
5/6 INPADOC - (C) INPADOC
PN - JP 11327331 A2 19991126 [JP11327331]
TI - IMAGE HEATING DEVICE AND IMAGE FORMING DEVICE
IN - TERADA HIROSHI; YAMAMOTO HAJIME; URATA YOSHITO; GANJI NOBUO; ISHIMARU
      NAOAKI
PA - MATSUSHITA ELECTRIC IND CO LTD
AP - JP 132984/98-A 19980515 [1998JP-0132984]
PR - JP 132984/98-A 19980515 [1998JP-0132984]
IC - G03G-015/20
6/6 INPADOC - (C) INPADOC
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PN - US 6021303 A 20000201 [US6021303]
TI - IMAGE HEATING DEVICE AND IMAGE FORMING DEVICE USING THE SAME
IN - TERADA HIROSHI [JP]; TOYODA AKINORI [JP]; URATA YOSHIHITO [JP];
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AP - US 309922/99-A 19990511 [1999US-0309922]
PR - JP 132984/98-A 19980515 [1998JP-0132984]
   - JP 203005/98-A 19980717 [1998JP-0203005]
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PN - US 6021303 [US6021303]
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DT - US-P
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     APPLICATION DATA (PATENT)
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    - 20021008 US/RF
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UP - 2002-42
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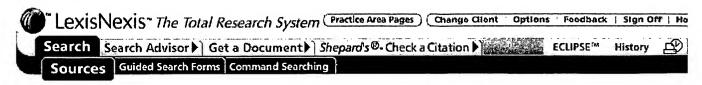
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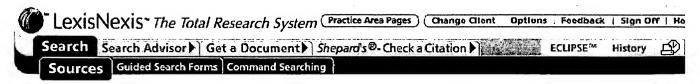
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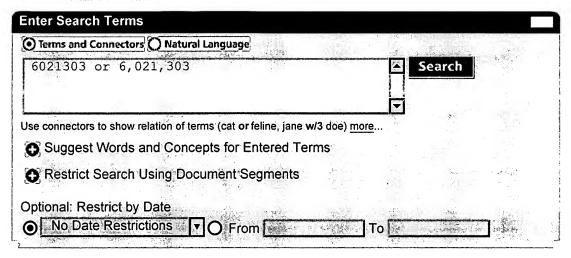
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